

The Claim Listing below will replace all prior versions of the claims in the application:

**Claim Listing:**

5        1. (Currently Amended) A method of delivery to the pulmonary system comprising: administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of a dry powder comprising:

10      a) a multivalent metal cation which is complexed with a therapeutic, prophylactic or diagnostic agent;

        b) a pharmaceutically acceptable carrier; and

        c) optionally, a multivalent metal cation-containing component wherein[[.]] the dry powder is spray-dried and has a total amount of

15      multivalent metal cation which is more than about [[1]]10% w/w or more of the total weight of the agent, a tap density of less than about 0.4 g/cm<sup>3</sup> or less, a median geometric diameter of between about 5 micrometers and about 30 micrometers and an aerodynamic diameter of from about 1 to about 5 microns.

20      2. (Original) The method of Claim 1, wherein the biologically active agent is a protein.

25      3. (Original) The method of Claim 2, wherein the protein is insulin.

        4. (Original) The method of Claim 2, wherein the multivalent metal cation is selected from Zn(II), Ca(II), Cu(II), Ni(II), Co(II), Fe(II), Ag(II), Mn(II), Mg(II) or Cd(II).

30      5. (Original) The method of Claim 4, wherein the multivalent metal cation is Zn(II).

6. (Currently Amended) The method of Claim 2, wherein the multivalent metal cation is present at ~~a ratio of more than~~ about [[2]] 30% w/w or more of the total weight of the agent.
- 5 7. (Currently Amended) The method of Claim 2, wherein the multivalent metal cation is present at ~~a ratio of more than~~ about [[5]] 50% w/w or more of the total weight of the agent.
- 10 8. (Original) The method of Claim 2, wherein complexation of the agent and multivalent metal cation comprises a metal coordination.
9. (Cancelled)
- 10 10. (Currently Amended) The method of Claim 2, wherein the dry powder has a tap density ~~less than~~ about 0.1 g/cm<sup>3</sup> or less.
11. (Cancelled)
12. (Cancelled)
- 20 13. (Previously Presented) The method of Claim 2, wherein the dry powder has an aerodynamic diameter of from about 1 to about 3 microns.
14. (Previously Presented) The method of Claim 2, wherein the dry powder has an aerodynamic diameter of from about 3 to about 5 microns.
- 25 15. (Original) The method of Claim 2, wherein delivery to the pulmonary system includes delivery to the deep lung.
- 30 16. (Original) The method of Claim 2, wherein delivery to the pulmonary system includes delivery to the central airways.

17. (Original) The method of Claim 2, wherein delivery to the pulmonary system includes delivery to the upper airways.
- 5 18. (Original) The method of Claim 2, wherein the dry powder further comprise a carboxylic acid.
- 10 19. (Original) The method of Claim 18, wherein the carboxylic acid includes at least two carboxyl groups.
- 20 21. (Original) The method of Claim 19, wherein the carboxylic acid is citric acid or a salt thereof.
- 15 22. (Original) The method of Claim 2, wherein the dry powder further comprise an amino acid.
23. (Original) The method of Claim 21, wherein the amino acid is hydrophobic.
- 20 24. (Original) The method of Claim 22, wherein the hydrophobic amino acid is leucine, isoleucine, alanine, valine, phenylalanine or any combination thereof.
- 25 25. (Original) The method of Claim 24 wherein the phospholipid is a phosphatidic acid, a phosphatidylcholine, a phosphatidylalkanolamine, a phosphatidylethanolamine, a phosphatidylglycerol, a phosphatidylserine, a phosphatidylinositol or combinations thereof.
- 30 26. (Currently Amended) A method of delivery to the pulmonary system comprising:

administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of a dry powder comprising:

- a) a protein which is complexed with zinc;
- b) a pharmaceutically acceptable carrier; and
- c) **optionally**, a multivalent metal cation-containing component

wherein[[.]] the dry powder is spray-dried and has a total amount of multivalent metal cation which is ~~more than~~ about [[2]] 10 % w/w or more of the total weight of the agent, a tap density of ~~less than~~ about 0.4 g/cm<sup>3</sup> or less, a median geometric diameter of between about 5 micrometers and about 30 micrometers and an aerodynamic diameter of from about 1 to about 5 microns.

27. (Currently Amended) The method of Claim 26, wherein the dry powder has a tap density ~~less than~~ about 0.1g/cm<sup>3</sup> or less.

15 28. (Original) The method of Claim 26, wherein the pharmaceutically acceptable carrier is a phospholipid.

29. (Original) The method of Claim 26 wherein the dry powder further comprises a carboxylic acid.

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30-48. (Cancelled)

49. (Currently Amended) A composition for delivery to the pulmonary system comprising:

25 administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of a dry powder comprising:

- a) a protein which is complexed with zinc;
- b) a pharmaceutically acceptable carrier; and
- c) **optionally**, a multivalent metal cation-containing component

30 wherein[[.]] the dry powder is spray-dried and has a total amount of multivalent metal cation which is ~~more than~~ about [[2]] 10 % w/w or more of the total weight

of the agent, a tap density of ~~less than~~ about 0.4 g/cm<sup>3</sup> or less, a median geometric diameter of between about 5 micrometers and about 30 micrometers and an aerodynamic diameter of from about 1 to about 5 microns.

5 50. (Currently Amended) The method of Claim 49, wherein the dry powder has a tap density ~~less than~~ about 0.1g/cm<sup>3</sup> or less.

51. (Original) The method of Claim 49, wherein the pharmaceutically acceptable carrier is a phospholipid.

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52. (Original) The method of Claim 49 wherein the dry powder further comprises a carboxylic acid.

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